## (19) World Intellectual Property Organization International Bureau



### I DERIO BULLERA IN BRUUN BERUR HIBI I IN BERUR BULLE BULLE BULLE BURLE BURLE BURLE BURLE BURLE BURLE BURLE BURL

#### (43) International Publication Date 6 September 2002 (06.09.2002)

### PCT

# (10) International Publication Number WO 02/069045 A2

(51) International Patent Classification7: G03F 7/09

[DE/DE]; Schönburgstr. 62, 01108 Dresden (DE). GANZ, Dietmar [DE/DE]; Schonstr. 25, 66806 Ensdorf (DE).

(21) International Application Number: PCT/EP02/01506

(74) Agent: EPPING, HERMANN & FISCHER; Ridlerstr.

(22) International Filing Date: 13 February 2002 (13.02.2002)

55, 80339 München (DE).

(25) Filing Language:

English (81) Designated States (national): JP, US.

(26) Publication Language:

English (84)

(30) Priority Data: 01104284.3

22 February 2001 (22.02.2001) EP

(84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

(71) Applicant (for all designated States except US): INFI-NEON TECHNOLOGIES SC300 GMBH & CO. KG

#### Published:

 without international search report and to be republished upon receipt of that report

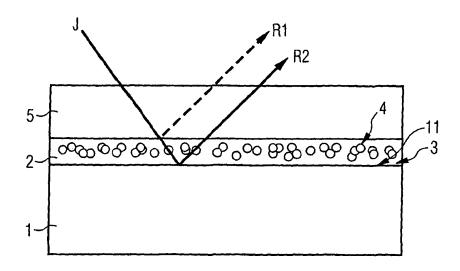
NEON TECHNOLOGIES SC300 GMBH & CO. KG [DE/DE]; Königsbrücker Str. 180, 01099 Dresden (DE).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventors; and

(75) Inventors/Applicants (for US only): HORNIG, Steffen

(54) Title: ANTI-REFLECTIVE COATING MATERIAL, SEMICONDUCTOR PRODUCT WITH AN ARC LAYER AND METHODS



(57) Abstract: The invention refers to an anti-reflective coating (ARC) layer (2) covering a semiconductor substrate, the ARC layer being made of a matrix substance (3) and of nanocrystalline particles (4) of another material than the matrix substance. According to the invention the nanocrystalline particles (4) are absorbing light via the quantum size effect. Thereby a new kind of ARC layer, in particular absorbing ARC layer, is provided.

02/069045 A2